

CLAIMS

1. A composition comprising a dendrimer complex, said dendrimer complex comprising first and second dendrimers, said first dendrimer comprising a first agent and a first linker and said second dendrimer comprising a second agent and a second linker, wherein said first agent is different than said second agent and wherein said first and second linkers comprise nucleic acid, wherein said first linker is hybridized to said second linker.

2. The composition of Claim 1, wherein a duplex formed from hybridization of said first linker to said second linker comprises a cleavage site.

3. The composition of Claim 2, wherein said cleavage site comprises a nuclease recognition site.

4. The composition of Claim 3, wherein said nuclease recognition site comprises a restriction endonuclease recognition site.

5. The composition of Claim 1, wherein said first and said second agents are selected from the group consisting of therapeutic agents, biological monitoring agents, biological imaging agents, targeting agents, and agents capable of identifying a specific signature of cellular abnormality.

6. The composition of Claim 1, wherein said first agent is a therapeutic agent and said second agent is a biological monitoring agent.

7. The composition of Claim 6, wherein said therapeutic agent is selected from a chemotherapeutic agent, an anti-oncogenic agent, an anti-vascularizing agent, and an expression construct comprising a nucleic acid encoding a therapeutic protein.

8. The composition of Claim 6, wherein said therapeutic agent is protected with a protecting group selected from photo-labile, radio-labile, and enzyme-labile protecting groups.

9. The composition of Claim 7, wherein said chemotherapeutic agent is selected from platinum complex, verapamil, podophyllotoxin, carboplatin, procarbazine, mechlorethamine, cyclophosphamide, camptothecin, ifosfamide, melphalan, chlorambucil, bisulfan, nitrosurea, adriamycin, dactinomycin, daunorubicin, doxorubicin, bleomycin, plicomycin, mitomycin, etoposide, tamoxifen, taxol, transplatinum, 5-fluorouracil, vincristin, vinblastin, and methotrexate.

10. The composition of Claim 7, wherein said anti-oncogenic agent comprises an antisense nucleic acid.

11. The composition of Claim 10, wherein said antisense nucleic acid comprises a sequence complementary to an RNA of an oncogene.

12. The composition of Claim 11, wherein said oncogene is selected from *abl*, *Bcl-2*, *Bcl-x_l*, *erb*, *fms*, *gsp*, *hst*, *jun*, *myc*, *neu*, *raf*, *ras*, *ret*, *src*, or *trk*.

13. The composition of Claim 7, wherein said nucleic acid encodes a factor selected from tumor suppressor, cytokine, receptor, inducer of apoptosis, or differentiating agent.

14. The composition of Claim 13, wherein said tumor suppressor is selected from BRCA1, BRCA2, C-CAM, p16, p21, p53, p73, Rb, and p27.

15. The composition of Claim 13, wherein said cytokine is selected from GMCSF, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, β -inteferon, γ -interferon, and TNF.

16. The composition of Claim 13, wherein said receptor is selected from CFTR, EGFR, estrogen receptor, IL-2 receptor, and VEGFR.

17. The composition of Claim 13, wherein said inducer of apoptosis is selected from AdE1B, Bad, Bak, Bax, Bid, Bik, Bim, Harakid, and ICE-CED3 protease.

18. The composition of Claim 5, wherein said biological monitoring agent comprises an agent that measures an effect of a therapeutic agent.

19. The composition of Claim 5, wherein said therapeutic agent comprises a short-half life radioisotope.

20. The composition of Claim 5, wherein said imaging agent comprises a radioactive label selected from ^{14}C , ^{36}Cl , ^{57}Co , ^{58}Co , ^{51}Cr , ^{125}I , ^{131}I , ^{111}In , ^{152}Eu , ^{59}Fe , ^{67}Ga , ^{32}P , ^{186}Re , ^{35}S , ^{75}Se , Tc-99m, and ^{169}Yb .

21. The composition of Claim 18, wherein said monitoring agent is capable of measuring the amount of apoptosis caused by said therapeutic agent.

22. The composition of Claim 5, wherein said targeting agent is selected from antibody, receptor ligand, hormone, vitamin, and antigen.

23. The composition of Claim 22, wherein said antibody is specific for a disease specific antigen.

24. The composition of Claim 23, wherein said disease specific antigen comprises a tumor specific antigen.

25. The composition of Claim 22, wherein said receptor ligand is selected from a ligand for CFTR, EGFR, estrogen receptor, FGR2, folate receptor, IL-2 receptor, glycoprotein, and VEGFR.